The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL J. NATKIN
and DAVID P. SIMONS

Appeal No. 2005-2635
Application 09/680,155[1]

ON BRIEF

Before KRASS, BARRETT, and DIXON, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-3, 5-14, 22-37, and 45-50. Claims 4, 15-21, and 38-44 are objected to as depending from a rejected parent claim.

We reverse.

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[1] Application for patent filed October 3, 2000, entitled "Tracking the Validity of Cache Frames in Digital Movie Editing."

BACKGROUND

The invention relates to determining the validity of cached frames of a compositing hierarchy as a composition tree of a digital video composition is edited.

Claim 5 is reproduced below.

> 5. A computer program product, tangibly stored on a machine-readable medium, for displaying a frame of a movie composition, the product comprising instructions operable to cause a programmable processor to:
>
> associate edit sequence information with an element of the movie composition, the edit sequence information specifying, for an interval of the element's timeline, an edit sequence position representing the position in a sequence of edits made to the movie composition of a most recent edit made that affects the element during the interval, the interval being a portion of the timeline;
>
> when caching a frame, associate with the cached frame an edit sequence position that represents a state of editing of the movie composition; and
>
> when displaying the frame, compare the edit sequence position associated with the cached frame with edit sequence information associated with the element.

THE REFERENCE

The examiner relies on the following reference:

Miller et al. (Miller) 5,801,685 September 1, 1998

THE REJECTIONS

Claims 1-3, 5-14, 22-37, and 45-50 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Miller.

Claims 9, 10, 32, and 33 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite.[2] The examiner states that the terms "may be" and "may" are relative terms which render the claims indefinite.

We refer to the final rejection (pages referred to as "FR__") and the examiner's answer (pages referred to as "EA__") for a statement of the examiner's rejection, and to the brief (pages referred to as "Br__") for a statement of appellants' arguments thereagainst.

DISCUSSION

Anticipation

Claims 5-14, 22-37, and 45-50

Claim 28 is directed to the method performed by the instructions of the computer program product in claim 5; thus, claim 5 may be analyzed as representative of these claims. Because we reverse the rejection of claim 5, there is no need to consider the separately argued groups within this group.

Appellants argue that Miller does not disclose any of the three elements of claim 5. The examiner obviously disagrees. It is clear to us that Miller is not directed to the same disclosed invention as appellants'. Miller is directed to a video editing

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[2] Although this ground of rejection is not repeated in the examiner's answer, the examiner responds to appellants' arguments regarding the rejection (answer, page 16) and, thus, the rejection has not been withdrawn.

system that provides dynamic synchronization of recorded video elements with a script text that is to be read by an announcer or displayed while the video element is played. An edit decision list (EDL) contains links between the script test and the video elements (video clips). Appellants' invention is directed to determining the validity of a cached frame when a sequence of edits are made to the movie composition, where "a 'composition' or 'comp' is a single level of a compositing tree and is composed of one or more layers" (specification, page 1, lines 13-14). Cache frames are used to prevent having to re-render a frame. "The goal of caching is to re-render a frame only if the cached frame has been invalidated by user edits, e.g., edits affecting the sources, parameters or structure of the composition tree." Specification, page 2, lines 8-10. Miller has nothing to do with checking the validity of cached frames to determine whether they need to be re-rendered, nor does it have anything to do with compositing as disclosed. We cannot tell from the statement of the rejection whether the examiner believes Miller to disclose the same invention as appellants' invention or whether the examiner considers the claims so broad that they read on Miller in an unintended manner. Assuming the latter situation is the case, we have tried to understand how the claims could be interpreted to read on Miller even though the inventions are not the same, but ultimately agree with appellants' arguments.

We can understand why Miller might have been tentatively considered as a reference. The EDL defines the order and play-time duration of the video clips and is synchronized with reading of the script text (abstract). The editing timeline is a graphical representation of the EDL and illustrates the start time of each video clip edit. The video clips are referred to as "video elements" (abstract), which sounds like the claimed "element of the movie composition." The EDL (timeline) can be changed (edited) to add, delete, or move video clips, and this sounds like "edit sequence information" because the video clips are arranged in sequence by editing. This is apparently the examiner's interpretation because the rejection (FR4; EA5) refers to the timeline at column 6, lines 28-38, of Miller for the first subparagraph of claim 5, although no one-to-one correspondence between the claim limitations and Miller has been set forth. Although some of the terminology sounds similar, we find that the limitations of claim 5 are not taught.

As to the first subparagraph of claim 5, appellants argue that Miller explains that an "edit" refers to a video clip, not a change to an element. The examiner responds that an "edit" is a change and that addition/deletion of frames is an edit (EA9 ¶ 1).

Some speculation is required as to the examiner's position. We presume the examiner considers an "element" to be a video element in Miller and that an "edit made that affects the element

during the interval" is, for example, changing the duration of the video clip. The "interval of the element's timeline" then has to be the length of the video clip on the editing timeline. Since this is not the critical language, we assume that this reading of terms onto Miller could be possible.

It is argued that the start time of each video clip in the EDL (timeline) of Miller "refers to points in time when video clips are played and not to points in time when changes are made to the video clips" (Br5) and "Miller neither contemplates nor discloses that the EDL includes times that indicate when changes were made to video clips" (Br6). The examiner disagrees, stating that when changes are made to the video clip, the starting point has to be adjusted for synchronization purposes (EA10 ¶ 2).

Claim 5 does not recite indicating the "points in time" when changes were made, but recites an "edit sequence position," which corresponds to a timestamp (specification, page 4, lines 27-28; Fig. 1b). Claim 5 recites, in part:

> the edit sequence information specifying, for an interval of the element's timeline, an edit sequence position representing the position in a sequence of edits made to the movie composition of a most recent edit made that affects the element during the interval, the interval being a portion of the timeline ....

Thus, each timestamp in the sequence of timestamps in Fig. 1b represents "an edit sequence position ... in a sequence of edits made to the movie composition"; e.g., an edit sequence position might indicate the 5th edit in a sequence of 10 edits. This

limitation is not disclosed in Miller. The editing timeline in Miller discloses a sequence of video clips and the position in time of a video clip within the sequence. The position in time is not "an edit sequence position representing the position in a sequence of edits made to the movie composition of a most recent edit made that affects the element during the interval"; i.e., position in a time sequence is not a position in an edit sequence. There is no record of the sequence of edits in Miller.

It is also argued that claim 5 recites that the edit position represents the position in a sequence of edits made to the movie composition of a most recent edit made that affects the element during an interval that is a portion of the timeline, and "[t]here is simply no description in Miller that the start times in the editing timeline applies to only a portion of the video clip" (Br7). The examiner disagrees and states that Miller's system is always updated to show the most recent edit (EA10 ¶ 3) and that the editing timeline indicates where all video and audio edits are placed with respect to each other (EA10 ¶ 4).

The examiner's responses do not address the arguments or the specific claim language. It is true that the timeline in Miller has intervals which represent the video elements (video clips). The "element's timeline" must be the portion of the overall timeline for that element (clip). However, as pointed out by appellants, claim 5 calls for "an interval of the element's

timeline, ... the interval being a portion of the timeline" and there is no description of any information applying only to a portion of the element's timeline.

As to the second subparagraph of claim 5, appellants argue (Br8):

> [E]ven assuming arguendo that the start times in the EDL indicate edit sequence information, Miller's automatic update process still fails to disclose the second element of claim 5 because the update process is independent of any frame caching. Specifically, there is no disclosure in Miller that its update process occurs when a frame is cached, which is required to disclose the second element of claim 5. Indeed, Miller does not contemplate frame caching.

The examiner responds that claim 5 does not mention an "update" process occurs when a frame is cached (EA10 ¶ 5).

It is true that claim 5 does not mention the word "update," as in claim 1. However, claim 5 recites "when caching a frame, associate with the cached frame an edit sequence position that represents a state of editing of the movie composition," which requires associating an edit sequence position with a frame when it is cached. Although Miller does not mention "frame caching," the examiner finds that storing is caching (EA10-11 ¶ 6). It is not necessary to decide this question because we agree with appellants that Miller does not disclose associating any kind of edit sequence position when a video clip is stored, as discussed in the brief (Br7-8). We agree with appellants that since Miller does not contemplate an edit sequence position, "Miller's EDL

update process cannot disclose associating an edit sequence position with a cached frame" (Br8).

As to the third subparagraph of claim 5, appellants argue that Miller does not disclose edit sequence information or frame caching and "[t]hus, Miller cannot disclose comparing the edit sequence position associated with a cached frame with the edit sequence information associated with the element, as required by the third element of claim 5" (Br9). The examiner responds that Miller shows control link sequences to video clips and other control sequences embedded in the script text and that storing clips in Miller is caching (EA10-11 ¶ 6).

We do not need to decide whether storing video clips is frame caching because we find there is no teaching of an "edit sequence position associated with the cached frame," or "edit sequence information associated with the element," or any comparison between the two. We do not find where the examiner addresses these specific limitations.

It is argued that "[t]here is simply no disclosure in Miller that the comparison of the current reading time and the start time occurs when the cached frame is displayed" (Br10). The examiner responds that claim 5 does not mention the current reading time and start time (EA11 ¶ 7).

The examiner misapprehends appellants' argument. Appellants are arguing that the reading time and start time in Miller do not

correspond to the claimed elements and that no comparison is made when the video clip is displayed. We agree with appellants.

For the reasons stated above, we find that Miller does not anticipate the subject matter of claim 5. The rejection of claims 5-14, 22-37, and 45-50 is reversed.

Claims 1-3

Claim 1 contains limitations similar to claim 5. For example, claim 1 recites "a global editing timestamp ..., the global editing timestamp representing an edit sequence position in a sequence of edits made to the movie" and claim 5 recites "edit sequence information ..., the edit sequence information specifying ... an edit sequence position representing the position in a sequence of edits made to the movie." Thus, claim 1 more specifically recites a "global editing timestamp" rather than the "edit sequence information" in claim 5. We agree with appellants' argument (Br12) that Miller does not teach an edit sequence position, as discussed in connection with claim 5.

Claim 1 recites "maintain a global editing timestamp that is updated with each editing operation performed by the system" and claim 5 recites "when caching a frame, associate with the cached frame an edit sequence position that represents a state of editing of the movie composition." We agree with appellants' argument (Br12) that Miller does not teach a global editing timestamp that is updated for each editing operation. Claim 1

recites "(a) comparing (i) an editing timestamp associated with the cached frame with (ii) the editing timestamps of intervals in the interval list map" and claim 5 recites "compare the edit sequence position associated with the cached frame with edit sequence information associated with the element." We find that Miller does not perform a comparison between these two quantities as discussed in connection with claim 5.

In addition, claim 1 recites an interval list, updating an interval list for a node when the node is edited, and using the interval list to evaluate the validity of a cached frame. The examiner refers to column 18, lines 54-67 (FR3), which describes Miller's timeline. As discussed in connection with claim 5, Miller's timeline does not disclose edit sequence information or edit sequence position and, therefore, it cannot disclose the claimed interval list. Claim 1 also requires "establish an interval list for each node in a compositing tree defining a movie." For the reasons stated by appellants (Br12-13), we agree that Miller discloses nothing that could possibly be construed as a compositing tree having nodes and that a mere listing of video clips is not a "compositing tree."

For at least the reasons stated above, we find that claim 1 is not anticipated by Miller. The rejection of claims 1-3 is affirmed.

Indefiniteness

The examiner states that the terms "may be" and "may" are relative terms which render the claims indefinite (FR2). Appellants argue (Br17): "[T]here is no indefiniteness as the interval that may be affected by an edit can be identified by identifying the interval that cannot be affected by an edit. The remainder of the element's timeline is the interval that may be affected by the edit." The examiner "strongly disagrees because the term 'may' or 'may be' means the following limitations to be included or excluded which clearly affects and completely changes the meaning of the claims" (EA16).

We understand the examiner's position to be that "may" indicates a certain measure of likelihood or possibility, which causes indefiniteness if one cannot be sure whether the interval will or will not be affected by the edit (claims 9 and 32) or whether the element will or will not be affected by the edit (claims 10 and 33). However, the specification indicates that an interval may or may not be affected by an edit, which indicates that the language is not indefinite. The specification discusses the range of time affected by an edit, referring to step 104 in Fig. 1a (page 6, lines 23-25). If a new layer is added, the layer is invalid over its entire range (page 6, lines 25-27). However, when the value of a keyframe for a layer at a particular time is altered, the range of time invalidated is usually less

than the entire range of time of the layer (page 7, lines 6-8). Since an interval is not always affected by an edit for its full range, the claim language is not indefinite. The rejection of claims 9, 10, 32, and 33 is reversed.

CONCLUSION

The rejection of claims 1-3, 5-14, 22-37, and 45-50 under 35 U.S.C. § 102(b) is reversed.

The rejection of claims 9, 10, 32, and 33 under 35 U.S.C. § 112, second paragraph, is reversed.

REVERSED

ERROL A. KRASS
Administrative Patent Judge

LEE E. BARRETT
Administrative Patent Judge

JOSEPH L. DIXON
Administrative Patent Judge

BOARD OF PATENT APPEALS AND INTERFERENCES

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FISH & RICHARDSON P.C.
P.O. Box 1022
MINNEAPOLIS, MN 55440-1022